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FIGS. 1 and 2. The multi-display system **900** also comprises the sidewalls **921**, **922** and **923**. The sidewalls **921–923** correspond to the sidewalls **203–205** in FIGS. 1 and 2.

The multi-display system **900** uses a mirror mounted on a first sidewall to reflect the image beam projected from an image projector mounted on a second sidewall back onto the second sidewall. An exemplary mirror **921** and image projector **901** is shown in FIG. 9. Image projector **901** is mounted proximate either the top edge or the bottom edge of the sidewall **912** and projects an image beam, shown as dotted lines, onto the mirror **902** mounted on the opposing sidewall **921**. Depending on whether the image projector **901** is mounted proximate the top edge or the bottom edge of the sidewall **912**, the mirror **902** is correspondingly tilted so that the image beam is reflected back onto the approximate center of the inner surface of the sidewall **912**. Corrective optics may be used in the image projector **901** to compensate for any keystone effects.

The result of using the mirror **902** arrangement is that the multi-display system **900** required to produce an image of a height, H, and width, W, on its sidewall is proportionally smaller than the multi-display system **100** required to produce an H×W image on its sidewall. Thus, the width and height of the sidewalls **911–913** may be made much closer to the dimensions, H×W, of the images projected thereon.

FIG. 10 is a top plan view of a multi-display system **1000** in accordance with another embodiment of the present invention. The multi-display system **1000** comprises sidewalls **1011**, **1012** and **1013** on which images may be projected. The sidewalls **1011–1013** correspond to the sidewalls **111–113** in FIGS. 1 and 2. The multi-display system **900** also comprises the sidewalls **1021**, **1022** and **1023**. The sidewalls **1021–1023** correspond to the sidewalls **203–205** in FIGS. 1 and 2.

The multi-display system **1000** uses a beam splitting device, such as a prism, mounted in the interior to reflect two or more image beams projected from an image projector onto the sidewalls of the multi-display system **1000**. An exemplary beam splitting device **1002** and image projector **1001** are shown in FIG. 10. Image projector **1001** is mounted on the sidewall **1012** and projects a single image beam, shown as a dotted line, into the beam splitting device **1002**. The beam splitting device **1002** emits two image beams, also shown as dotted lines, onto the sidewalls **1011** and **1013**.

Using the beam splitting device **1002** allow a single image projector **1001** to produce video images on two or more inner surfaces of the sidewalls of the multi-display system **100**. Since the multi-display system **1000** requires only one, rather than three image projectors, the weight, the complexity, and the cost of the multi-display system **1000** is thereby reduced.

Although the present invention and its advantages have been described in detail, those skilled in the art should understand that they can make various changes, substitutions and alterations herein without departing from the spirit and scope of the invention in its broadest form.

What is claimed is:

1. A multi-display system comprising:

a structure having a substantially inflexible frame and a plurality of sides that cooperatively form an enclosure

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having a volume, at least two of said sides including light transmissive portions; and

at least two image projectors, disposed within said structure, that are capable of projecting intersecting image beams through said volume of said enclosure onto said at least two of said sides to thereby produce viewable images on said light transmissive portions that are viewable by viewers outside said multi-display system, each one of said at least two image projectors disposed opposite an associated one of said light transmissive portions thereby minimizing said volume of said enclosure.

2. The multi-display system set forth in claim 1 wherein at least a portion of said projected image beams intersect without interference.

3. The multi-display system set forth in claim 1 wherein said structure is substantially a polygon and a first one of said image projectors is associated with a vertex of said polygon.

4. The multi-display system set forth in claim 3 wherein a first one of said sides is substantially opposite said vertex.

5. The multi-display system set forth in claim 1 wherein a first one of said image projectors is associated with a first one of said sides and a second one of said image projectors is associated with a second one of said sides.

6. The multi-display system set forth in claim 1 wherein said multi-display system further comprises means for associating said multi-display system with at least one of a ceiling, a deck and another multi-display system.

7. The multi-display system set forth in claim 1 wherein said plurality of sides at least substantially ensconce said enclosure.

8. The multi-display system set forth in claim 1 wherein at least one of said sides includes a substantially opaque portion.

9. The multi-display system set forth in claim 1 further comprising a controller that is capable of controlling at least one of said at least two image projectors and at least one of said projected image beams.

10. The multi-display system set forth in claim 1 further comprising a means for adjusting a relative distance between said multi-display system and a deck.

11. A multi-display system comprising:

a structure having a substantially inflexible frame and a plurality of sides that cooperatively form an enclosure having a volume, at least two of said sides including light transmissive portions; and

at least two image projectors, disposed within said structure, that are capable of projecting image beams through said volume of said enclosure that produce viewable images through said light transmissive portions that are viewable by viewers outside said multi-display system, at least a portion of said projected image beams intersecting without interfering with said produced viewable images, each one of said at least two image projectors disposed opposite an associated one of said light transmissive portions thereby minimizing said volume of said enclosure.

12. The multi-display system set forth in claim 11 wherein said structure is substantially a polygon and a first one of said image projectors is associated with a vertex of said polygon.

13. The multi-display system set forth in claim 12 wherein said first one of said sides is substantially opposite said vertex.